AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for frequency correction in a multicarrier system, comprising:

- receiving a signal comprising a stream of data signals, wherein at least one of the data signals comprises at least two data signal samples,
- calculating an estimated phase offset for each data signal as a function ~~of~~ thereof,
- calculating a predicted phase offset for each data signal as a function of the estimated phase offset thereof and the estimated phase offset of a preceding one of the data signals such that the ratio of the calculated predicted phase offset of each data signal and the estimated phase offset of a first data signal of said stream substantially equals the ratio of a distance (X_{k+1}) between a beginning of a following one of the data signals and a main phase reference point and a distance (Y_1) between a phase reference point of the first data signal and the main reference point, said distances (X_{k+1}, Y_1) being indicative of a number of data signal samples in the time-domain, and
- correcting the received signal ~~by correcting a phase of each data signal as a function of~~using the predicted phase offset ~~thereof~~.

2. (Previously Presented) The method according to claim 1, comprising:
- calculating the predicted phase offset further as a function of the predicted phase offset of the preceding one of the data signals , or
- calculating the predicted phase offset further as a function of the predicted phase offset of the preceding one of the data signals and the predicted phase offset of one of the data signals preceding the preceding one of the data signals.

3. (Previously Presented) The method according to claim 1, comprising:
- calculating a phase correction offset for each data signal as a function of the predicted phase offset of the preceding one of the data signals , and
- correcting each data signal as a function of the phase correction offset thereof.

4. (Original) The method according to claim 1, comprising:
- separating each data signal in at least two data signal samples ,
- calculating a predicted sample phase offset for each of said data signal samples as a function of the predicted phase offset of a corresponding one of the data signals , and
- correcting the phase of each data signal further by correcting a phase of each of the data signal samples as a function of a respective one of the predicted sample phase offsets .

5. (Previously Presented) The method according to claim 4, comprising:
- separating each data signal ($r_{C,l}[k]$) such that a first of the data signal samples ($r_{C,1}[k]$) represents the beginning of the corresponding one of the data signals ($r_{C,l}[k]$).

6. (Previously Presented) The method of claim 4 comprising:
- calculating a sample phase correction offset for each of the data signal samples as a function of the predicted sample phase offset and the predicted phase offset of the corresponding one of the data signal, and
- correcting the phase of each data signal by correcting the phase of each of the data signal samples thereof as a function of a corresponding one of the phase correction offsets and a corresponding one of the sample phase correction offsets.

7. (Previously Presented) The method of claim 4, comprising:
- calculating each predicted sample offset as a function of the predicted phase offset of the corresponding one of the data signals and a measure being indicative of a distance

(x_{k+1}) between a main phase reference point for the received signal and a phase reference point for the preceding one of the data signals.

8. (Previously Presented) The method of claim 1, comprising:
- receiving a preamble signal preceding the data signals,
- calculating an estimated phase arc as a function of the preamble signal, and
- calculating the estimated phase offset of the data signal subsequent the preamble signal as a function thereof and the estimated phase arc.

9. (Previously Presented) The method of claim 7, comprising:
- defining the main phase reference point to be indicative of the middle of the preamble signal in the time domain, and/or
- defining the phase reference points to be indicative of the beginning of the corresponding data signal in the time domain.

10. (Previously Presented) The method according to claim 9, comprising:
- defining a phase reference point for the data signal subsequent the preamble signal to be indicative of the middle of the subsequent data signal in the time domain.

11. (Previously Presented) The method according to claim 4, comprising:
- separating each data signal in the data signal samples by means of sampling the received signal or each data signal.

12 .(Currently Amended) The method according to claim 1, comprising:
- receiving an orthogonal frequency division multiplex signal as the received signal, wherein a stream of ~~symboles~~symbols thereof represent the stream of data signals, and at least one preamble symbol thereof represent the preamble signal.

13. (Currently Amended) An apparatus for frequency correction in a multicarrier system, comprising:

- a receiver~~ing means~~ ~~for receiving~~configured to receive a signal comprising a stream of data signals, at least one of the data signals comprising at least two data signal samples,
- a frequency corrector~~ion means~~ ~~for~~ configured to perform frequency correction of each data signal in response to a corresponding predicted phase offset, and
- a phase locked loop ~~means~~ (6,... 24) ~~for generating~~configured to generate the predicted phase offsets, comprising
  - -- a phase ~~discrimination means~~discriminator (12, 14, 16) ~~for generating~~configured to generate an estimated phase offset for each data signal as a function thereof,
  - -- a filter ~~means~~ (18, 20, 22) ~~for receiving~~configured to receive estimates phase offsets and ~~generating~~ to generate the predicted phase offset for each data signal as a function of the estimated phase offset thereof and the estimated phase offset of a preceding one of the data signals~~.~~, wherein the filter is adapted to generate the predicted phase offset of each data signal such that a ratio of the generated predicted phase offset of each data signal and the estimated phase offset of the first data signal of said stream substantially equals a ratio of a distance (X_{k+1}) between a beginning of a following one of the data signals and a main phase reference point and a distance (Y_1) between a reference point of the first data signal and the main reference point, said distances (X_{k+1}, Y_1) being indicative of a number of data signal samples in the time domain.

14. (Currently Amended) The apparatus according to claim 13, ~~characterized by~~wherein:

- the filter ~~means comprising~~comprises a first order loop filter ~~means for receiving~~configured to receive the estimated phase offsets and an integrator for receiving outputs of the first order loop filter~~ means~~.

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15. (Currently Amended) The apparatus according to claim 14, ~~characterized by~~further comprising:

- a delay ~~means~~ device ~~for receiving~~configured to receive outputs of the integrator.

16. (Currently Amended) The apparatus according to claim 13, ~~characterized by~~further comprising:

- a ~~calculation means~~ calculator ~~for calculating~~configured to calculate predicted sample phase offsets in response to the predicted phase offsets.

17. (Currently Amended) The apparatus according to claim 16, ~~characterized by~~wherein:

- the ~~calculation means being~~ calculator is coupled to the filter~~ means~~.

18. (Currently Amended) The apparatus according to claim 17, ~~characterizes by~~wherein:

- the ~~calculation means being~~ calculator is coupled to the delay ~~means~~device.

19. (Currently Amended) The apparatus according to claim 13, ~~characterized by~~wherein:

- the frequency ~~correction means being~~ corrector is coupled to the filter ~~means~~ and the ~~calculation means~~calculator.

20. (Currently Amended) The apparatus according to claim 13, ~~characterized by~~wherein:

- the frequency ~~correction means (6)~~corrector and the filter ~~means (18, 20, 22) being~~ are adapted to be operated according to the method of claim 1.

21. (Currently Amended) A transceiver for wireless communication, ~~characterized by~~comprising the apparatus according to claim 13.

22. (Currently Amended) A transceiver for wireless communication, ~~characterized by being~~ adapted to be operated by the method according to claim 1.

23. (New) The apparatus according to claim 13, wherein

said filter comprises a first filter coefficient being indicative of noise suppression, the first filter coefficient being defined to substantially satisfy the equation

$a = X_2 / Y_1$,

wherein a is a first filter coefficient, X_2 is a distance between the beginning of a second data signal of said stream and the main phase reference point, and Y_1 is a distance between the reference point of the first data signal of said stream and the main reference point, said distances (X_2, Y_1) being indicative of the number of data signal samples in the time domain.

24. (New) The apparatus according to claim 23, wherein a is substantially 1.43.

25. (New) The apparatus according to claim 13, wherein

said filter comprises a second filter coefficient being indicative of the filter's acquisition time, the second filter coefficient being defined to substantially satisfy the equation

$b = (X_3 - 2*X_2) / Y_1$,

wherein b is a second filter coefficient, X_3 is a distance between the beginning of a third data signal of said stream and the main phase reference point, X_2 is a distance between a beginning of the second data signal of said stream and the main phase reference point, and Y_1 is a distance between the reference point of the first data signal of

said stream and the main reference point, said distances (X_2, X_3,Y_1) being indicative of the number of data signal samples in the time domain.

26. (New) The apparatus according to claim 25, wherein b is substantially - 0.714.

27. (New) The apparatus according to claim 13, wherein

said filter comprises a first filter coefficient and a second filter coefficient being indicative of noise suppression and the filter's acquisition time, the first and the second filter coefficients being defined to substantially satisfy the equations

$a = X_2 / Y_1$, and

$b = (X_3 - 2*X_2) / Y_1$,

wherein a is a first filter coefficient and b is a second filter coefficient, X_3 is a distance between a beginning of a third data signal of said stream and the main phase reference point, X_2 is a distance between a beginning of a second data signal of said stream and the main phase reference point, and Y_1 is a distance between the reference point of the first data signal of said stream and the main reference point, said distances (X_2, X_3 , Y_1) being indicative of the number of data signal samples in the time domain.

28. (New) The apparatus according to claim 27, wherein a is substantially 1.43 and b is substantially - 0.714.

29. (New) The apparatus according to claim 13, wherein said apparatus is adapted to receive and frequency correct an orthogonal frequency division multiplex (OFDM) signal comprising a stream of data signals.

30. (New) The apparatus according to claim 29, wherein said orthogonal frequency division multiplex (OFDM) signal further comprises at least one preamble symbol thereof representing a preamble signal.

31. (New) The apparatus according to claim 30, wherein the main phase reference point\ is indicative of the middle of the preamble signal in the time domain.

32. (New) The apparatus according to claim 13, wherein the phase reference point of the first data signal is indicative of the beginning of the first data signal in the time domain.

33. (New) The apparatus according to claim 30, wherein the phase reference point of the first data signal is indicative of a middle of the first data signal subsequent the preamble signal in the time domain.

34. (New) The method according to claim 1, further comprising correcting the received signal by correcting a phase of each data signal as a function of the predicted phase offset thereof.